

| A System will be a second of the second of t       | general de la companya de la company | Single American<br>American American<br>American American  | e e li Aright<br>Arrivit (1994)   | teres de la companya de la companya<br>Companya de la companya de la compa  |
|--|--|--|---|---|
| Table Kommune<br>Reference   | gettigg (* Secgelge).<br>Herefore til grape  | Police of the Company | eng talapapan tagen k<br>Kasal satisan yang   | Although the second of the sec  |
| Charles (1965)<br>Market Alles (1965)<br>Market France   | e twict Allese<br>Again Least 7<br>The tellest W1  | er jaren er en er  | North Control of the | A Branda  |
| migration and the control of the con       | A A A A A A A  | e garage di selesarian<br>gran transferi yang  | A TOTAL TO |   |
| Michael Cher<br>Charles Michael<br>Charles Michael   | turk (g. 1944)<br>1990 - Arrabet<br>1991 - Fridaystan  | awer ein arr<br>neingert Bardhereer<br>I eine Alleer   | Agilian ili magam<br>Angaliang<br>Angaliang   | Medical transfer<br>Land Contra   |
| randa (j. 1945)<br>Permenantan   | Address of the second  | Elevation Man  | Harris San  | *Aprillar of College and<br>Aprillar of College   |
| est a les entre da la company<br>les estados de la company<br>la companya de la company | e transfer in the interest of the second sec | Millian All pelitit<br>Arithea i Kamayn<br>Solo i Molan  | i koji je koji di<br>Postavi Alijos Alestrija<br>Postavi Serve  | <ul> <li>A tentral transport of New York</li> <li>A tentral transport of the part of the part</li></ul> |

February 27, 2003

WRITER'S DIRECT NUMBER: (202) 772-8645 INTERNET ADDRESS: JASONE@SKGE.COM

Commissioner for Patents Washington, D.C. 20231

Re:

U.S. Utility Patent Application

Appl. No. 09/972,019; Filed: October 5, 2001

Low Offset and Low Glitch Energy Charge Pump for PLL-Based

**Timing Recovery Systems** 

Inventors:

Myles H. Wakayama

Our Ref:

1875.2070002

Sir:

Transmitted herewith for appropriate action are the following documents:

Amendment and Reply under 37 C.F.R. § 1.111; and 1.

2. Return postcard.

TECHNOLOGY LEWIER 2800 It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Jason D. Eisenberg Attorney for Applicants

Registration No. 43,447

JDE/kae ::ODMA MHODMA SKGF DC1;101454;1 SKGF Rev. 2 15 02 dcw



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Myles H. Wakayama

Appl. No. 09/972,019

Filed: October 5, 2001

For: Low

Low Offset and Low Glitch Energy Charge Pump for PLL-

**Based Timing Recovery Systems** 

Confirmation No.: 3152

Art Unit: 2817

Examiner: A. Kinkead

Atty. Docket: 1875.2070002

Amendment and Reply under 37 C.F.R. § 1.111

Commissioner for Patents Washington, D.C. 20231

Sir:

In reply to the Office Action dated **December 31, 2002**, (PTO Prosecution File Wrapper Paper No. 7), Applicant submits the following Amendment and Remarks. This Amendment is provided in the following format:

- (A) A clean version of each replacement paragraph/section/claim along with clear instructions for entry;
- (B) Starting on a separate page, appropriate remarks and arguments. 37 C.F.R. §
- 1.111 and MPEP 714; and
- (C) Starting on a separate page, a marked-up version entitled: "Version with markings to show changes made."

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

## Amendments

Please replace pending claim 45 with the following new claim 45.

45. (Amended) A method of controlling a charge pump having two parallel current paths formed of transistors, each current path having an output node and coupled between a first current source and a second current source, said charge pump operating within a phase lock loop, the method comprising the steps of:

detecting a phase or frequency characteristic of an input signal to produce an output signal;

receiving said output signal at said charge pump and using said output signal to produce a charge pump control signal;

generating a characteristic current using one of said first current path and said second current path in response to said charge pump control signal; and controlling a value of one of said first current source and said second current source to minimize D.C. offsets resulting from parasitic capacitances of said transistors.